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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,292	03/08/2001	Li-tien Chang	CHANG-101	6897

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MR. LI-TIEN CHANG
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EXAMINER

MATTIS, JASON E

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 08/12/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,292

Applicant(s)

CHANG ET AL.

Examiner

Jason E Mattis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 15, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Turudic (U.S. Pat. 5422876).

With respect to claim 1, Turudic discloses a telecommunication device **(See column 7 lines 33-47 and Figure 4 of Turudic for reference to terminating equipment 114, which is a telecommunication device)**. Turudic also discloses that the telecommunication device comprises a detection means for detecting an existence of continuity in a network path between at least two nodes of a network **(See column 1 line 65 to column 2 line 2, column 7 line to column 8 line 14 and Figure 4 of Turudic for reference to testing nodes with a loopback mechanism and for reference to the terminating equipment 114 as well as other network nodes 116, 118, and 120 containing loopback command devices 130 and control mechanisms 128 that are used for loopback testing)**. Turudic further discloses addressable codes activating at least one switch connecting the at least two nodes to produce one of a loop-up state and a loop-down state **(See column 9 line 66 to column 10 line 41 of Turudic for reference to using a code, which is addressed to a network node a certain number of hops away, being used to both place loopback**

systems, which contain a switch, of the network nodes in either an “on”, loop-up, state or “off”, loop-down state).

With respect to claim 2, Turudic discloses that the switch is in a closed position during the loop-up state and in an open position during the loop-down state (See column 9 line 66 to column 10 line 41 of Turudic for reference to the during the “on” state, a loopback being created, meaning the switch is closed to connected the device in the loopback state, and for reference to during the “off” state, a loopback condition being prevented, meaning the switch is open to prevent the loopback connection).

With respect to claim 15, Turudic discloses a telecommunications network containing at least two nodes (See column 7 lines 33-47 and Figure 4 of Turudic for reference to a telecommunications network containing network nodes 114, 116, 118, and 120). Turudic also discloses a network path connected to each of the at least tow nodes and providing communication there between (See column 7 lines 48-62 and Figure 4 of Turudic for reference to a transmit line 122 connecting each of the each of the network nodes to provide communication between the nodes). Turudic further discloses detector mean (See column 1 line 65 to column 2 line 2, column 7 line 33 to column 8 line 14 and Figure 4 of Turudic for reference to testing or detecting nodes with a loopback mechanism and for reference to the terminating equipment 114 as well as other network nodes 116, 118, and 120 containing loopback command devices 130 and control mechanisms 128 that are used for loopback testing or detecting). Turudic also discloses

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the detector means comprising at least one normally open switch and at least one addressable code whereby, upon transmission of the addressable code to the detection means, the at least one normally open switch closes, creating a loop-up state and connecting the detector means to the network path (**See column 9 line 66 to column 10 line 41 of Turudic for reference to using a code, which is addressed to a network node a certain number of hops away, being used to both place loopback systems, which contain a switch, of the network nodes in either an "on", loop-up, state or "off", loop-down state, with the loopback system, or detectors, being connected to the network path during the "on" state).**

With respect to claim 22, Turudic discloses that the detector means comprises a microprocessor and software (See column 11 lines 36-48 and Figure 6 of Turudic for reference to the loopback device 126 containing a processor 150 that controls the operation of the loopback device, and which also must include software to be able to control the loopback device).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 9-11, 13-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turudic in view of Sommer (U.S. Application 09/882288).

With respect to claim 9, Turudic discloses a telecommunication network comprising at least two nodes **(See column 7 lines 33-47 and Figure 4 of Turudic for reference to a telecommunications network containing network nodes 114, 116, 118, and 120)**. Turudic also discloses at least one detection means for detecting an existence of continuity in a network path joining the two nodes **(See column 1 line 65 to column 2 line 2, column 7 line 33 to column 8 line 14 and Figure 4 of Turudic for reference to testing or detecting nodes with a loopback mechanism and for reference to the terminating equipment 114 as well as other network nodes 116, 118, and 120 containing loopback command devices 130 and control mechanisms 128 that are used for loopback testing or detecting and for reference to a transmit line 122 connecting each of the each of the network nodes to provide communication between the nodes)**. Turudic further discloses the detection means comprising at least one normally open switch connecting the at least two nodes and a method for determining the continuity of the network path comprising the steps of sending an addressable code to the detecting means resulting in at least one normally open switch closing and generation of a loop-up state **(See column 9 line 66 to column 10 line 41 of Turudic for reference to**

using a code, which is addressed to a network node a certain number of hops away, being used to both place loopback systems, which contain a switch, of the network nodes in either an "on", loop-up, state or "off", loop-down state, producing a loopback state when the node is in the "on position"). Turudic does not disclose transmitting an addressable loop-up acknowledgment code with the detection means to one of the two nodes, resulting in a determination of the continuity of the network path between the detection means and the nodes.

Sommer, in the field of communications, discloses a loopback connection system and method that uses commands including loopback acknowledgment commands to test for node continuity (**See Page 9 paragraph 104 of Sommer for reference to sending an acknowledgment in response to receiving a loopback command**). Sending an acknowledgment to a loopback command has the advantage of allowing the system to make sure that a loopback connection has been made before beginning a testing procedure.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Sommer, to combine sending an acknowledgment to a loopback command, as suggested by Sommer, with the system and method of Turudic, with the motivation being to allow the system to make sure that a loopback connection has been made before beginning a testing procedure.

With respect to claim 10, Turudic discloses that the closed normally open switch is opened resulting in a loop-down state (**See column 9 line 66 to**

column 10 line 41 of Turudic for reference to using a code, which is addressed to a network node a certain number of hops away, being used to both place loopback systems, which contain a switch, of the network nodes in either an “on”, loop-up, state or “off”, loop-down state).

With respect to claim 11, Turudic discloses that the loop-up state results in on of turning on and turning off an appliance connected to the network (See column 9 line 66 to column 10 line 41 of Turudic for reference to using a code, which is addressed to a network node, which is a network appliance, a certain number of hops away, being used to both place loopback systems, which contain a switch, of the network nodes in either an “on”, loop-up, state or “off”, loop-down state).

With respect to claim 13, Turudic discloses that the addressable code is transmitted by wired means (See column 9 line 66 to column 10 line 41 of Turudic for reference to transmitting the loopback command using the wired lines of the communication system).

With respect to claims 3, 14, and 16, Turudic does not disclose a timing circuit that controls a time period for one of a loop-up and loop-down state assigned to the switch.

Sommer discloses using a timer circuit to control the length of time that a loopback, or loop-up, connection is maintained (See Page 9 paragraph 104 of Sommer for reference to using a timer circuit). Using a timer circuit to control the length of time a loop-up connection is maintained has the advantage of

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allowing a loopback device to terminate a loop-up connection without having to send an addition command to the node to terminate the loop-up connection.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Sommer, to combine using a timer circuit to control the length of time a loop-up connection is maintained, as suggested by Sommer, with the system and method of Turudic, with the motivation being to allow a loopback device to terminate a loop-up connection without having to send an addition command to the node to terminate the loop-up connection.

4. Claims 4-6 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turudic in view of Sasaki et al. (U.S. Pat. 6061391).

With respect to claims 4 and 17, Turudic does not disclose an indicator means for determining a status of the device.

With respect to claims 5 and 18, Turudic does not disclose the indicator means indicating at least one of the loop-up state, the loop-down state, and a malfunction state.

With respect to claims 6 and 19, Turudic does not disclose the indicator means comprising a plurality of light indicators each corresponding to one of the loop-up state, the loop-down state, and the malfunction state.

Sasaki et al., in the field of communications, discloses error indicators being used in a loop back testing device that use LED lights to indicate the state of the device, which is either loop-up or loop-down, as well as errors, which are

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malfunction states (**See the abstract of Sasaki et al. for reference to the LED light indicators**). Using lights to indicate the state of a loopback device has the advantage of allowing a user to quickly and easily determine the state of the loopback device.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Sasaki et al., to combine using lights to indicate the state of a loopback device, as suggested by Sasaki et al., with the system and method of Turudic, with the motivation being to allow a user to quickly and easily determine the state of the loopback device.

5. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turudic in view of Arai et al. (U.S. Pat. 6519229).

With respect to claims 7 and 20, Turudic does not disclose receiving the addressable codes by wireless means.

Aria et al., in the field of communications, discloses sending loopback commands, or codes, wireless to devices (**See column 4 lines 15-31 of Aria et al. for reference to sending a loopback signal wirelessly**). Sending and receiving codes wirelessly has the advantage of being able to implement a system in an environment where hard wiring is not possible.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Aria et al., to combine sending and receiving codes wirelessly, as suggested by Aria et al., with the system and

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method of Turudic, with the motivation being to be able to implement a system in an environment where hard wiring is not possible.

6. Claims 8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turudic in view of Wagner et al. (U.S. Pat. 5541582).

With respect to claims 8 and 21, Turudic does not disclose the detection means comprising a delay storage circuit.

Wagner et al., in the field of communications, discloses a system where communication devices only send messages when a clear to send signal has been output, meaning there is a delay storage circuit which stores data to be sent on a one-way transmission path until a clear to send signal has been sent (**See column 5 lines 11-45 of Wagner et al. for reference to using the clear to send signal to determine when a transmission path can be used**). Using a delay storage circuit has the advantage of preventing data collisions when sending data to network nodes over a one-way transmission path.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Wagner et al., to combine the use of a delay storage circuit, as suggested by Wagner et al., with the system and method of Turudic, with the motivation being to prevent data collisions when sending data to network nodes over a one-way transmission path.

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7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Turudic in view of Sommer as applied to claims 3, 9-11, 13-14, and 16 above, and further in view of Arai et al.

With respect to claim 12, the combination of Turudic and Sommer does not disclose transmitting the addressable code by wireless means.

Aria et al., in the field of communications, discloses sending loopback commands, or codes, wireless to devices **(See column 4 lines 15-31 of Aria et al. for reference to sending a loopback signal wirelessly)**.

Sending and receiving codes wirelessly has the advantage of being able to implement a system in an environment where hard wiring is not possible.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Aria et al., to combine sending and receiving codes wirelessly, as suggested by Aria et al., with the system and method of Turudic and Sommer, with the motivation being to be able to implement a system in an environment where hard wiring is not possible.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chang et al. (U.S. Pat. 5010544) discloses another loopback fault detection system.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E Mattis whose telephone number is (703) 305-8702. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason E Mattis
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